

## REMARKS

Please note that the enclosed specification is a copy of the originally filed specification with paragraph numbers added thereto. It is noted that the addition of paragraph numbers does not require the submission of a substitute specification. As a precautionary measure, a copy of the originally filed specification, without paragraph numbers, also accompanies this Preliminary Amendment.

Accompanying this response, please find marked-up paragraphs of the specification which overcome some informalities noted in the specification. The undersigned avers that the enclosed replacement paragraph(s) of the specification do not contain any new matter.

Please consider new claims 36-82 upon consideration of this application.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,



Michael J. Bujold, Reg. No. 32,018

**Customer No. 020210**

Davis & Bujold, P.L.L.C.

Fourth Floor

500 North Commercial Street

Manchester NH 03101-1151

Telephone 603-624-9220

Facsimile 603-624-9229

MARKED-UP VERSION OF PAGE 1 OF THE SPECIFICATION

[001] APPARATUS FOR MEASURING PARAMETERS RELATING TO THE  
TRAJECTORY AND/OR MOTION OF A MOVING ARTICLE

[002] This application is a divisional of U.S. Serial No. 09/291,273 filed April 14,  
1999 which is a continuation-in-part of PCT/GB97/02873 filed October 17, 1997.

[003] TECHNICAL FIELD

[004] This invention relates to apparatus for measuring parameters relating to the  
trajectory and/or motion of a moving article and, in particular, apparatus for measuring  
and recording the pre-impact and post-impact position and/or motion of a golf clubhead  
and golf ball during the execution of a golf shot.

[005] BACKGROUND ART

[006] Most contemporary commercial golf swing analysers use arrays of light beams  
and coating electro-optical sensors. In a typical conventional golf swing analyser, a  
plurality of discrete light sensors are arranged in line at regular, known intervals, with  
two or more such arrays built into a playing mat and extending transversely to the  
intended direction of clubhead travel prior to ball impact. The light sensors are normally  
illuminated from a single source at ceiling height so that the effective light beams  
received by each sensor in an array are approximately parallel and vertical. The light  
sensors detect the shadow of a clubhead as it travels at speed towards a golf ball. By  
recording and processing the sequence of light interrupts in the light sensors, various  
parameters such as clubhead speed, swingpath angle, impact offset and clubface angle  
at impact can be computed.